



National Defense Center for
Energy and Environment

The EQTOP as an Authoritative Source for Environmental Data Collection

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Presentation Outline

- The EQTOP Defined
- Objectives, Approach, and Downselection of Case Studies
- Environmental Data Cross Walk
- NEPA Applicability Analysis
- Cost Determination and Cost Benefit Analysis
- Other Environmental Data Collection Initiatives
- Acknowledgements
- Questions and Discussion

The EQTOP Defined

- **What is the EQTOP (TOP 1-1-062 “*Environmental Effects Data Collection*”)?**
 - ✓ The Environmental Quality Test Operations Procedure (EQTOP) is a set of methods for collecting environmental effects data during weapon system testing. Intent is to use with test-specific TOPs.
 - ✓ Commodities may range from wheeled, tracked, and special purpose vehicles to missile and rocket systems.
- **Why is it There?**
 - ✓ Environmental quality issues associated with new materiel systems need to be collected; but, they are not always reported nor compiled on a consistent basis.
 - ✓ Environmental impacts are often measured during testing, but not normally recorded, nor reported, unless they are a part of performance requirements.

The EQTOP Defined (cont.)

- **Why Should We Care?**

EQTOP data supports:

- ✓ Installations in preparation of accurate and defensible acquisition-related National Environmental Policy Act (NEPA) documents and analysis.
- ✓ Program Executive Offices (PEOs) and Program Management (PM) Materiel Developers in managing and mitigating EQ effects.
- ✓ Accurate costing of EQ components of weapon system life cycle cost estimates.



The EQTOP directs gathering of EQ information on new systems and provides an adequate analysis of potential impacts to minimize those impacts and enhance readiness.

Objectives, Approach, and Downselection of Case Studies

- The NDCEE will help determine if data collections provide meaningful and useful data for:
 - ✓ *Materiel developers / PMs in mitigating environmental risks; and,*
 - ✓ *Installations to develop mitigation measures to minimize environmental impacts once a materiel system is implemented, transitioned, or otherwise fielded.*



**Estimating Training Land
Capacity and
Maintenance Practices**



**Supporting Life Cycle Cost
Estimates and Defensible EQ
Decisions**



**Supporting Impact Analysis
and NEPA and Permitting
Initiatives**

Objectives, Approach, and Downselection of Case Studies (cont.)

- The NDCEE is validating EQTOP's output to provide defensible EQ data and report on effectiveness, adequacy, and applicability to support NEPA requirements.
 - ✓ *Quantify potential environmental quality impacts;*
 - ✓ *Facilitate appropriate changes to systems under evaluation;*
 - ✓ *Initiate preparedness at deployment site for fielding; and,*
 - ✓ *Limit overall life cycle costs prior to fielding.*



EQTOP data supports the preparation of accurate and timely NEPA and other site-specific environmental reporting documentation.

Environmental Data Cross Walk

- The NDCEE is determining which data sets collected from current TOPs are used in fielding materiel and are acceptable as a substitute for the EQTOP data.

- ✓ The Developmental Test Command's TOP Process is the EQTOP Foundation.
- ✓ Many required data points are gathered, but are not consistently reported, adequately evaluated, nor archived.
- ✓ Multiple types of tests are ongoing and EQ Testing can be leveraged to reduce costs!



A Single EQTOP procedure can be leveraged to assure effective EQ data collection.

Environmental Data Cross Walk (cont.)

- EQ Data from two systems are currently being evaluated as a part of the EQTOP effort: (1) The Stryker Infantry Carrier Vehicle (ICV); and, (2) Insensitive Munitions Explosive (IMX-101).
- Working with Aberdeen Test Center (ATC), EQ data collected will be evaluated against: TOP 1-1-062, the requirements of NEPA, and relevant DoD Directives (6050.1 and 6050.7) to evaluate the effectiveness of the current EQTOP.
- Key Data Elements:
 - ✓ Air
 - ✓ Wastewater
 - ✓ Hazardous Materials / Waste
 - ✓ Solid Waste
 - ✓ Noise
 - ✓ Ground Disturbance (Soil Impacts)
 - ✓ Wildlife / Habitat
 - ✓ Storm water

NEPA Applicability Analysis

- How does the EQTOP support DoD in meeting the requirements of the NEPA, 32 CFR Part 651 (and relevant Directives) in mitigating environmental risks?
- The Primary Question: Can the EQTOP support effective NEPA analysis and allow materiel developers and installations to minimize impacts?
- The NDC EE is completing a matrix detailing tests associated with each NEPA level including Categorical Exclusion, Environmental Assessment; and, Environmental Impact Statement.

Cost Determination and Cost Benefit Analysis

- How does the baseline cost estimate for the environmental analysis and validation compare to basic NEPA requirements on candidate systems?
- The NDCEE is working to determine costs associated with performing analysis and validation.
- A Cost Report is being developed that documents the costs associated with performing the EQTOP analysis, and the team will summarize the costing method and final results.



Understanding cost considerations are integral to the DoD acquisition process.

Other Environmental Data Collection Initiatives

- Other environmental data collection and analysis initiatives exist to assure risks are considered throughout the acquisition lifecycle.
 - ✓ **Department of Defense Directive (DoDD) 5000.01** requires the PM to be the single point of accountability for program objectives including total-life cycle systems management, sustainment, and ESOH related risks.
 - ✓ **Department of Defense Instruction (DoDI) 5000.02** requires the PM to consider, manage, and reduce ESOH risks and hazards and requires the completion of a Programmatic Environment, Safety, and Occupational Health Evaluation (PESHE) by Milestone B.
 - ✓ **Army Regulation (AR) 40-5** requires the establishment of preventive medicine programs and services and provides military-specific force health preparedness, protection, sustainment and recovery interventions / measures.
 - ✓ **AR 40-10** requires the completion of a Health Hazard Assessment (HHA) to utilize a composite risk assessment approach to identify health hazards, demonstrate compliance, and assess the level of risk associated with each hazardous situation in support of the Army acquisition process.

Other Environmental Data Collection Initiatives (cont.)

- Key data collection initiatives being compared and contrasted against the EQTOP under this initiative include:
 - ✓ The Office of the Deputy Under Secretary of Defense (Installations & Environment): “*DoD Life Cycle Assessment Process for Sustainability in DoD Acquisitions*”
 - ✓ The U.S. Army Research, Development and Engineering Command (RDECOM): “*Developmental Environment, Safety and Occupational Health Evaluation (DESHE)*”
- Currently EQTOP is the only published, authoritative source for directing environmental quality data collection for the fielding of new systems.
 - ✓ Defense Technical Information Center (DTIC) AD No.: ADA488014 (12-09-2008).

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Questions and Discussion

